

Intracranial Lesions Leading to Impaired Vision and Blindness in Aba, South-East Nigeria: A Case Series

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Background: Visual impairment due to intracranial lesions could be debilitating and may present initially to the ophthalmologist. Ophthalmological manifestation of intracranial space occupying lesions correlates with the site of the brain lesion.¹ This study aims to report 7 cases of intracranial lesions leading to visual impairment and blindness with a view to enhancing knowledge of visual symptoms in patients with intracranial space occupying lesions.

Methods: This is a case series carried out at Abia State University Teaching Hospital (ABSUTH) Aba, South-East, Nigeria. The subjects were patients who presented to the ophthalmology clinic with features suggestive of intracranial space occupying lesions from June 2013 to May 2018. Ophthalmic assessment and cross-sectional radiological investigations were carried out on all patients. Demographic data and other relevant information were extracted from their case notes and presented below.

Case 1: A 54-year-old female house wife presented with double vision, eye and head ache, and hemiparesis of 2 months duration. Significant past medical history was hypertension and a fall. Bilateral splinter hemorrhage was noted on fundoscopy. Radiologic diagnosis was chronic bilateral subdural hematoma.

Case 2: A 39-year-old male civil servant presented with blurred vision, double vision and photophobia of 1 year duration. Fundoscopy evaluation revealed pale left optic disc, not cupped and bilateral impending macula holes. A radiological diagnosis of pituitary macroadenoma was made.

Case 3: A 44-year-old male trader presented with double vision, tinnitus, inability to walk, syncope and vomiting. The eye findings were normal. A radiological diagnosis was left cerebral and cerebellar ischaemic infarction.

Case 4: A 16-year-old female student presented with bilateral visual loss of 2 months duration. Significant past medical history was recent onset of urinary incontinence and enuresis. Pupils were mid dilated and not reactive to light. Atrophic optic discs were seen on fundoscopic examination and a radiological diagnosis of craniopharyngioma was made.

Case 5: A 37-year-old female interior decorator presented with reduced vision, eye and headache of 2 years duration. There was no light perception on the left eye and a sluggish right pupil. On fundoscopy, bilateral lens opacities, disc atrophy and posterior subluxation of the right lens were elicited. Radiological diagnoses were bilateral cataracts and cerebral glioma

Case 6: A 19-year-old female student presented with double vision on distant gaze and right convergent squint of 2 weeks duration. Bilateral disc edema was seen on fundoscopy. A diagnosis of right middle cerebral artery aneurysm was made on computed tomography.

Case 7: A 46-year-old male trader presented with bilateral blurring of vision of 4 months duration. Significant past medical history was head trauma and hypertension. The pupils were mid dilated and sluggish. Patient was blind in both eyes. Fundoscopy revealed bilateral hazy media and optic disc atrophy. Neurodegenerative disease was diagnosed on magnetic resonance imaging.

Discussion: Visual abnormalities, impairment and blindness may be the presenting features of an intracranial space occupying lesion.² Its recognition can aid in timely detection and prompt application of diagnostic and therapeutic modalities leading to a reduction in morbidity and mortality. About sixty percent of patients in this case series presented with diplopia. Disorders causing diplopia may arise due to lesions affecting any part of the third, fourth and sixth cranial nerves or due to diseases affecting the extra ocular muscles.³ Paresis of the lateral rectus muscle due to aneurysm of the middle cerebral artery, can lead to left convergent squint.^{4,5,6} The optic disc splinter hemorrhage in the patient with subdural haematoma can be explained by the fact that the

subarachnoid space around the optic nerve is continuous with the subdural space of the brain.⁷ Headache is a common manifestation of intracranial space occupying lesions;^{1,8} it is probably due to raised intracranial pressure. Urinary incontinence and enuresis were noted in a 16 year old patient with a huge craniopharyngioma. Cortical lesions like tumors can lead to inappropriate voiding secondary to depressed social awareness, decreased sensation and/or inappropriate urethral sphincter relaxation.⁹

Conclusion: There are varied presentations of intracranial space occupying lesions. Detailed history, clinical examination and ancillary investigations should be recommended for patients in which clinical suspicion of intracranial space occupying lesion is high.

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